

Stages and Michigan Special Education Assessment

OVERVIEW

Stages includes two major software components: (a) informal assessment software and (b) curriculum software. Stages informal assessment software is instructional in nature, providing activities with constructive feedback and opportunities for the learner to explore and choose. Stages curriculum software is a collection of interactive daily instructional programs appropriate for learners at each Stage.

Stages software enhances Michigan's special education assessment process because:

- 1. Stages aligns with the Michigan Curriculum Frameworks in Mathematics and English Language Arts.**
- 2. Stages generates records of learner performance.**
- 3. Stages provides learners with the opportunity for increased independence.**
- 4. Stages assists the learner's IEP team with selecting assistive technology and assessment tools.**

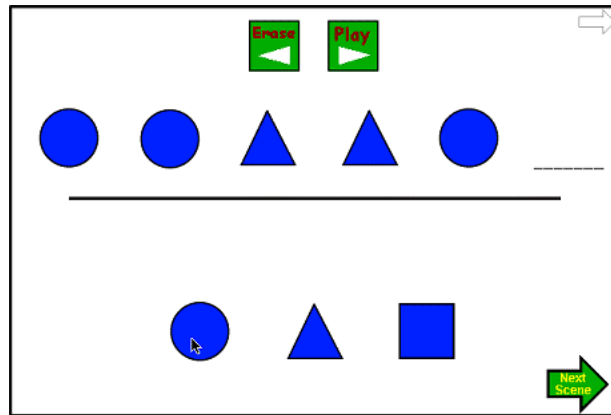
1. Stages aligns with the Michigan Curriculum Frameworks in Mathematics and English Language Arts.

Stages ensures meaningful and effective access to general curriculum areas for learners who require accommodations or modifications in order to participate in statewide assessment. Until MI-Access (Michigan's Alternate Assessment Program) development is complete in 2005, IEP teams must independently determine assessment options for each learner. The learner's IEP team can use Stages to choose an appropriate method of assessment by providing benchmarks of learner progress in Math and English Language Arts general curriculum areas. Please refer to the section of this document entitled "How Stages Correlates with Michigan Curriculum Frameworks" for detailed matching.

2. Stages generates records of learner performance.

During Stages software activities, the instructor can print directly from any screen to capture a learner-generated product as a benchmark. At the end of each activity, a report with instructional data about the time spent, choices made, response accuracy or work product, input method, prompt type, and time/date stamp are displayed with the learner's name. The instructor may wish to then print that screen or save the information as a text-format electronic file.

Observation guidelines and forms in the Stages kits help the instructional team make the most out of an activity session. The data-gathering features of the software enable the observer to focus on noting the learner's behavior and thinking-out-loud responses. Two adults from the instructional team can work together: one adult can encourage the learner and the other can note valuable data about behaviors without being noticed by the learner. Alternatively if a video or still camera is available, it may be directed at the learner and the computer monitor to discreetly record interactions and other behaviors while one adult coaches. During the sessions, the learner will be less conscious of her performance being recorded, making her responses more candid. Over time, the collected data will provide evidence that the instructional team needs to build a complete picture of the learner's skill achievement.



Example screen shot from Stage Four: Create Patterns

3. Stages provides learners with the opportunity for increased independence.

The feedback in Stages activities is encouraging and rewarding, providing a relaxed setting for exploring topics and demonstrating skills with minimal supervision. Many Stages activities include accessible choice-making opportunities. Functional skills activities include real-life community settings.

4. Stages assists the learner's IEP team with selecting assistive technology and assessment tools..

In addition to alternate assessment options, the Michigan Department of Education separately defines *alternative* assessment as the general assessment with major modifications. Stages activities can help the IEP team determine the learner's accessibility needs as well as the learner's functional academic level. An objective of Stages software is to provide several options for input methods and other settings so that the learner's instructor, parents, and others in the IEP team can determine his ideal learning and communication environment. Different devices, auditory feedback, speeds and prompts are among the variables.

SUMMARY

Stages augments the Michigan assessment cycle for special education. The Stages software is a comprehensive benchmark tool to assist the instructional team in collecting valuable information on learner skill achievement, determine assessment strategy, and discover the learner's abilities and thinking approach.

How Stages Correlates with Michigan Curriculum Frameworks¹

Mathematics - Elementary

Strand I. Patterns, Relationships, and Functions

Content Standard 1: Students recognize similarities and generalize patterns, use patterns to create models and make predictions, describe the nature of patterns and relationships, and construct representations of mathematical relationships.

Related Stages Assessment Activities:

Stage Four: Math Readiness: Explore Patterns, Continue/Fill-In Patterns, Create Patterns

- Stage Four *Patterns* activities introduce the learner to patterns of shapes, color, and sound, have them continue patterns, and allow them to generate their own patterns. These activities give the learner an opportunity to discover patterns using on-screen manipulatives in preparation for work with number patterns.

Content Standard 2: Students describe the relationships among variables, predict what will happen to one variable as another variable is changed, analyze natural variation and sources of variability, and compare patterns of change.

Related Stages Assessment Activities:

Stage Five: Math: Charts and Graphs

- Stage Five *Charts and Graphs* applies the learner's ability to compare quantitative information using tables and charts.

Strand II. Geometry and Measurement

Content Standard 1: Students develop spatial sense, use shape as an analytic and descriptive tool, identify characteristics and define shapes, identify properties and describe relationships among shapes.

Related Stages Assessment Activities:

Stage Four: Math Readiness: Estimation

Shapes: Explore and Assess

Stage Five: Problem Solving: Mystery Shape

- Stage Four *Estimation* gives the learner an opportunity to demonstrate knowledge of vocabulary to describe relative size and quantity such as 'biggest/smallest' or 'many/few.' In the *Shapes* activities, the learner demonstrates recognition of triangles, rectangles, circles, squares, and ovals in photographs and drawings in scenes and in isolation (blank background).
- Stage Five *Mystery Shape* applies the learner's knowledge of shape attributes to a deductive reasoning game.

¹ Information from Michigan Curriculum Framework, 1996 (Accessed July 2, 2002).

Source: http://www.michigan.gov/documents/MichiganCurriculumFramework_8172_7.pdf

Content Standard 2: Students identify locations of objects, identify location relative to other objects, [and describe the effects of transformations (e.g., sliding, flipping, turning, enlarging, reducing) on an object].

Related Stages Assessment Activities:

Stage Four: Math Readiness: Spatial Relationships

- Stage Four *Spatial Relationships* gives the learner an opportunity to demonstrate knowledge of vocabulary to describe relative position such as ‘above/below’ or ‘left/right.’

Content Standard 3: Students compare attributes of two objects, or of one object with a standard (unit), and analyze situations to determine what measurement(s) should be made and to what level of precision.

Related Stages Assessment Activities:

Stage Two: Attributes

Stage Five: Math: Geometry

Problem Solving: Mystery Shape, Mystery Person

- Stage Two introduces the learner to the concept of object attributes such as color and size using familiar nouns such as animals and toys.
- Stage Five *Geometry* applies the learner’s knowledge of attributes such as perimeter and area in order to compare objects. On-screen diagrams show non-conventional units such as footsteps, tiles, and cubes. Attributes such as colors and number of sides in the *Mystery* activities help the learner find an object by elimination of choices.

Strand III. Data Analysis and Statistics

Content Standard 1: Students collect and explore data, organize data into a useful form, and develop skill in representing and reading data displayed in different formats.

Content Standard 2: Students examine data and describe characteristics of a distribution, relate data to the situation from which they arose, and use data to answer questions convincingly and persuasively.

Related Stages Assessment Activities:

Stage Five: Math: Charts and Graphs

- The Stage Five *Charts and Graphs* activity includes bar graphs, line graphs, and pie charts.

Strand IV. Number Sense and Numeration

Content Standard 1: Students experience counting and measuring activities to develop intuitive sense about numbers, develop understanding about properties of numbers, understand the need for and existence of different sets of numbers, and investigate properties of special numbers.

Related Stages Assessment Activities:

Stage Four: Math Readiness: Number ID, Counting

Stage Five: Math: Explore Fractions

Stage Six: Explore: Money ID, Time Orientation

- Stage Four *Number ID* gives the learner an opportunity to demonstrate mastery of number names, using a telephone keypad and elevator scene. *Counting* includes a number line to assist the learner in correctly counting the number of objects on the screen.
- Stage Five *Explore Fractions* exposes the learner to the concept of fractions and fractional notation.
- Stage Six *Money ID* introduces the learner to the concept of money amounts in decimal quantities. *Time Orientation* gives the learner an opportunity to explore analog and digital clocks.

Content Standard 2: Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations.

Related Stages Assessment Activities:

Stage Five: *Math:* Fractions

Stage Six: *Assess:* Counting Money, Telling Time

- Stage Five *Fractions* includes parts of whole objects (regions) and parts of groups (sets) of objects. The multiple choice questions ask the learner to distinguish fractions with like and unlike denominators.
- Stage Six *Counting Money* gives the learner a chance to apply knowledge of decimals. *Telling Time* asks the learner to read analog and digital clocks. In both activities, each question is related to a scenario of daily living such as work or recreation.

Strand V. Numerical and Algebraic Operations and Analytical Thinking

Content Standard 1: Students understand and use various types of operations (e.g., addition, subtraction, multiplication, division) to solve problems.

Related Stages Assessment Activities:

Stage Five: *Math:* Math Facts (+, -, x, ÷), Word Problems (+, -, x, ÷)

- The Stage Five *Math Facts* activity asks the learner to perform the basic operations of addition and subtraction with and without regrouping; multiplication of two single-digit numbers; and division without remainders. The *Word Problems* activity asks the learner to solve problems with or without the aid of an illustration.

English Language Arts - Early Elementary

Meaning and Communication

Content Standard 1: All students will read and comprehend general and technical material.

Related Stages Assessment Activities:

Stage Two: Nouns, Verbs, Attributes

Stage Five: Reading: Sounds, Meaning

Stage Six: Stories: Cody, Mitchell, Meg, Adam, Ryan

- *Nouns, Verbs, and Attributes* are collections of activities. The activities within each collection expose the learner to different types of words or word combinations from the Dolch word list. Multiple representations of objects (photograph, drawing, symbol) help the learner begin to generalize word meaning to different instances of the same object.
- Stage Five *Sounds* highlights spelling patterns to emphasize the rhyming final sounds of words. The activity gives the learner short rhyming sentence pairs with simple animations. The screen displays text while audio plays. The learner then has a chance to identify the rhyming word pairs from a word wall. The *Meaning* activity presents the learner with Dolch words. The learner selects the picture in a scene that illustrates the meaning of the word.
- The Stage Six *Stories* activities are short passages that the learner may hear and read (multisensory), read silently (visual only), or listen to without text (auditory only).

Content Standard 2: All students will demonstrate the ability to write clear and grammatically correct sentences, paragraphs, and compositions.

Related Stages Assessment Activities:

Stage Six: Stories: Cody, Mitchell, Meg, Adam, Ryan

- *Nouns, Verbs, and Attributes* are collections of activities. The activities within each collection expose the learner to different types of words or word combinations from the Dolch word list. Multiple representations of objects (photograph, drawing, symbol) help the learner begin to generalize word meaning to different instances of the same object.

Genre and Craft of Language

Content Standard 8: All students will explore and use the characteristics of different types of texts, aesthetic elements, and mechanics—including text structure, figurative and descriptive language, spelling, punctuation, and grammar—to construct and convey meaning.

Related Stages Assessment Activities:

Stage Seven: Making Sentences: Building Sentences, Writing Sentences, Spelling and Grammar.

Making Stories

- *Building Sentences* gives the learner an opportunity to demonstrate knowledge of sentence structure without requiring typing skills. The activity is a collection of three levels of word walls with text-to-speech capability. *Writing Sentences* is another unstructured activity. The instructor can provide instructions or prompts for each sentence. *Spelling and Grammar* is a collection of different activities including: Spelling, Homonyms, Capitalization, Noun-Verb Agreement, Pronoun Use, Word Order, and a Custom option.
- The learner independently selects a picture as a writing prompt in *Making Stories*, or can import a custom photograph. An on-screen keyboard option and text-to-speech capability provide accessibility and the opportunity for increased independence.